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| APPLICATION NO | FLING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|----------------|------------|--------------------------------|---------------------|------------------|
| 09/890,681 | 01/10/2002 | Paulo Vicente Da Silva Marques | MCW-003US | 6722 |

059 7590 05/14/2003

LAHIVE & COCKFIELD
28 STATE STREET
BOSTON, MA 02109

[REDACTED] EXAMINER

HOFFMANN, JOHN M

[REDACTED] ART UNIT [REDACTED] PAPER NUMBER

1731

DATE MAILED: 05/14/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

MK

Office Action Summary

| Application No. | Applicant(s) |
|-----------------|------------------------|
| 09/890,681 | DA SILVA MARQUES ET AL |
| Examiner | Art Unit |
| John Hottmann | 1731 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1--15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-15 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 10 January 2002 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).* See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s) _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6-7 | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

Figures 1-2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1- are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1, lines 9-10 refer to "said inlet ports upstream of said gas mixing region". There is no prior mention of any ports being upstream of the mixing region. It is unclear if all of the ports must be upstream of the mixing region - or if only one must be.

Claim 1, line 7 refers to "its respective inlet port" - however, lines 5-6 requires that there be a plurality of inlet ports that are connected to the torch conduit. It is unclear if line 7 should be "ports", or if lines 5-6 doesn't require a plurality. One cannot tell how many inlet ports are required.

Claim 1: line 8. Examiner cannot tell what is including the chamber (line 8): the burner or the torch conduit.

Claim 4 and 5 refers to "the inlet port"; the claim is indefinite as to whether it is the port of claim 1, line 7 or the "at least one" of line 9.

Claims 10 and 12 : there is no antecedent basis for "said other inlet ports". To have other ports, there must be at least 3 ports - there is no indication that the plurality has 3 ports. One looking at claim 10 would be confused as to whether claim 10 requires 3 ports, or if claim 10 implies that claim 1 requires 3 ports, or if the claim is to be interpreted as; "if there are other inlet ports, then...."; which would then imply if there are only two inlet ports, then the claim doesn't require anything.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1- are rejected under 35 U.S.C. 102(b) as being anticipated by Nath 4440558.

Looking at figure 1 of Nath: 20 and/or 9 is “said torch conduit”. 14 and 15 are the plurality of inlet ports that are at least indirectly connected to the torch conduit. 3 is the gas mixing region. 12 is the gas expansion chamber.

Claim 2, it is deemed that the expansion chamber is a reservoir chamber because it is a chamber and because it could function as a reservoir. Examiner could find no definition for “reservoir chamber” that would contradict such an interpretation.

Claim 3: chamber 12 is right “at” the junction of 15 and 9 (an inlet port and the torch conduit).

Claim 5: chamber 12 is downstream of the junction between 7/13 and 8.

Claim 4: Revisiting all of the limitations of claim 1 first: The frusto-conical section (between 9 and 20) is the “torch conduit”. A “port” is nothing more than an “opening”. The upper end of 9 is the “respective inlet port” (i.e. inlet opening) that is connected to the mixing region 3 (and/or 6) by means of the conduit. The gas expansion chamber 12 is clearly upstream of the junction between that inlet port and the conduit.

Claims 6-9 and 15 are directed to is a method of intended use which does not import any structural limitations into the claims.

Claim 10: the port of 9 which opens into 20 is in a plane which is different from that of 21 which opens into 9.

Claim 11 is clearly met. The two planes are parallel. The angle between them is 0 or 180 degrees - depending upon how one looks at them - such are equivalent.

Claim 12: The vertical ports of 14 or 15 can be deemed the first port - they have an angle of zero - the ports of 21,13, or 7 is 90 degrees; the second angle. The first angle is less than the second angle.

Allowable Subject Matter

Claims 13-14 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Hiraiwa, Sayce, Presby, Nozawa, Sato, Hawtof and Tanaka are cited as being relevant to Applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Hoffmann whose telephone number is 703-308-0469. The examiner can normally be reached on Monday through Friday, 7:00- 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve Griffin can be reached on 703-308-1164. The fax phone numbers for

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Art Unit: 1731

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the organization where this application or proceeding is assigned are 703-305-7115 for regular communications and 703-305-3599 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0651.

John Hoffmann
Primary Examiner
Art Unit 1731

5-13-03

jmh
May 13, 2003